

sub-display device **3b** display images, such as text, still images, and moving pictures, according to control signals from the video circuit **2**. The video decoder/encoder **4** is a circuit having an encoder that encodes images taken with a camera **5** into compressed data in accordance with an encoding format such as MPEG4 (Moving Picture Experts Group 4), and having a decoder that decodes encoded data received through an antenna **11** and the transmitter-receiver circuit **10** and restores it into original images. A commercially available MPEG decoder-encoder IC, for example, may be used as the video decoder/encoder **4**. The I/O controller **6** is an input-output processing controller that transmits input signals from various devices to the MPU **1**, and transmits output signals from the MPU **1** to the various devices. The opening-closing sensor **7** is a sensor that detects the position of the moveable sub-display device **3b**. For example, a switch may be provided in a position where the switch is pushed by the sub-display device **3b** or its casing when the sub-display device **3b** is moved into closed position. A plurality of operation buttons **8** is assigned to various functions and characters, and is used as input devices. The memory **9** stores various types of programs and data. The type of memory used (volatile memory, non-volatile memory, etc.) is what is appropriate in accordance with the type of data.

[0047] The transmitter-receiver circuit **10** is a circuit that performs voice and data communication through the antenna **11**. Various types of circuit are known for the transmitter-receiver circuit **10**, and the already widely used PDC (Personal Digital Cellular), GSM (Global System for Mobile Communications), and CDMA (Code Division Multiple Access) formats, or next generation communication formats, which are expected to become widely used in the future, such as WCDMA (Wide-band Code Division Multiple Access), and Cdma2000, may be used as transmitter-receiver circuit communication formats. The voice decoder/encoder **12** is a circuit that has an encoder, which encodes voice signals obtained with a microphone **14**, and a decoder that decodes into voice signals encoded data received by the transmitter-receiver circuit **10**. As a voice coding scheme, the CELP (Code Excited Linear Prediction) encoding scheme is widely known. The voice signals decoded in the voice decoder/encoder **12** are reproduced through a speaker **13**.

[0048] In addition, the speaker **13** is not limited to reproducing voice signals but can also reproduce music and sound effects from electrical signals formed in a synthesizer circuit, which is not shown in the figure.

[0049] FIGS. 2 and 3 are front views of the mobile communications device, and the symbols used refer to the same or equivalent components as those in FIG. 1. Here, FIG. 2 illustrates the situation where the sub-display device **3b** is hidden at the back side of the main display device **3a**. The sub-display device **3b**, as shown in FIG. 3, has a structure in which it slides relative to a main casing **20**, and the user can use the main display device **3a** in addition to **3b** at the same time. Moreover, buttons **8a-8c** are input devices that function as the operation buttons **8**. The selector **8a** has a direction-key function that generates a direction-indicating signal by the rim portion being pushed, and a decision-button function that, by the central part of the button being pushed down, confirms a designated option and indicates a next operation. For example, when the user specifies an

option on a menu, by the user instructing the movement of a cursor or a highlighted display on the screen and pushing the button, the MPU **1** performs a process associated with that option. Software keys **8b**, associated with an option displayed on the main display device **3a** or **3b**, are an input device used when execution of the displayed function has been specified. Numerical buttons **8c** are an input device used to input numbers or text characters.

[0050] FIGS. 4 and 5 are front views of the mobile communications device shown in FIGS. 2 and 3, and the symbols used in these figures refer to the same or equivalent components as those in FIG. 1. Here, FIG. 4 illustrates a situation where the sub-display device **3b** is hidden and not-in-use, as in FIG. 2. And on the other hand, FIG. 5 corresponds to FIG. 3, and illustrates the situation where the main display device **3a** has been slid out relative to the main casing **20**. As may be understood from FIG. 5, the main casing **20** and the sub-casing **21**, which supports the sub-display device **3b**, are configured such that a sliding face is on a curved surface. Therefore, when the sub-casing **21** is pulled out, since the sub-casing **21**, and the camera **5** and the sub-display device **3b**, are thrust out frontward with the angle changing, the camera **5** and the sub-display device **3b** are set at an angle that facilitates user usage.

[0051] (1) E-Mail Receiving and Browsing Operations

[0052] Next, e-mail browsing operations using the above-described mobile communications device will be explained.

[0053] Here, a situation where a plurality of e-mails is received by the transmitter-receiver circuit **10** and is stored in the memory **9** is assumed. When the user selects a received e-mail list browsing function from the menu displayed on the main display device **3a**, as shown in FIG. 6(a), a list of the plurality of received e-mail subject names, senders, transmitting times, etc. is displayed. Next, the user specifies a desired received e-mail using the button **8a**. Further, in this situation, only the received e-mail is specified, and following action based on the designation does not occur.

[0054] In conventional mobile communications devices, in order to display details of received e-mail from this situation, it is necessary to push a decision button. In the mobile communications device of this invention, on the other hand, as shown in FIG. 6(b), by pulling out the sub-casing **21**, the MPU **1** activates the sub-display device **3b** automatically, and displays the details of the specified received e-mail on the sub-display device **3b**. Since in this situation it becomes unnecessary to carry out both the operation in which the user pulls out the sub-casing **21** and the operation of pushing the decision button that displays the details of the received e-mail, an improvement in user-friendliness is obtained. Moreover, where sub-display device **3b** is not used, by pushing down the center of the button **8a**, the user can choose browser display of the received e-mail, and the MPU **1** displays the details of the specified received email on the main display **3a**, instead of displaying a received e-mail list.

[0055] FIG. 7 is a flow chart of the e-mail browsing operations explained using FIG. 6. Here, e-mail browsing is shown as a representative example, but it can be applied to cases where other functions are realized. When the e-mail browsing function is selected by the user, the MPU **1** reads